

CLAIMS

1. A process for isolating a promoter capable of driving fruit-specific expression of DNA sequences in transgenic blackcurrant and other non-climacteric fruit comprising
- 5 a) isolating mRNA from ripening blackcurrant fruit
b) preparing a cDNA library from the isolated mRNA
c) differentially screening the library from b) to identify genes expressed during the ripening period
- 10 and
d) screening a genomic library with probes prepared from cDNA identified according to c) to isolate the corresponding gene and its promoter region.
2. A promoter capable of driving fruit-specific expression of DNA sequences in transgenic blackcurrant and other non-climacteric fruit obtainable by the process of claim 1.
- 15 3. A promoter according to claim 2 which comprises the sequence of nucleic acid bases in Figure 9 or IDSEQ 11 (the RIB1 gene promoter) or IDSEQ 14 (the RIB 7 gene promoter)..
- 20 4. Promoter DNA sequences which hybridise to the DNA of claim 3 under conditions of high stringency.
- 25 5. cDNA for genes which exhibit differential expression in fruit during the ripening period of fruit development selected from pRIB1 (IDSEQ 1), pRIB3 (IDSEQ 3), pRIB5 (IDSEQ 5), pRIB6 (IDSEQ 7) and pRIB7 (IDSEQ 9).
- 30 6. DNA encoding the RIB1 or RIB 7 gene.
7. A vector comprising the DNA as claimed in any one of claims 2 to 6.
8. Use of a promoter according to claim 2,3 or 4 to control the expression of one or more genes in climacteric or non-climacteric fruit.

9. Use according to claim 8 wherein the non-climacteric fruit is blackcurrant.
10. Use of a promoter according to claim 2,3 or 4 in the transformation of plant cells.
- 5 11. Plant cells and plants transformed using a promoter according to claims 2,3 or 4 or a vector according to claim 7.
12. Plants comprising cells according to claim 11 and descendants thereof.
- 10 13. Plants and seeds according to claim 12 which are blackcurrants and products prepared therefrom.
14. A process according to claim 1 wherein the method for extracting nucleic acid from blackcurrant fruit comprises homogenising by pulping blackcurrant fruit in a buffer containing insoluble polyvinylpolypyrrolidone.
- 15 15. Proteins encoded by the DNA sequences of claims 5 or 6.

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